

Warm Up # 1-5

Vocabulary from Wed:

data	mean	parameter	discrete
datum	median	random	continuous
population	mode	bias	accurate
sample	statistic	census	precise

Discuss with your team and look up any you still don't know. Write a clear definition for any three.

HW Questions: p. 166

EXERCISE 6C

- 1 Arthur catches the train to school from a busy train station. Over the course of 30 days he counts the number of people waiting at the station when the train arrives.

17 25 32 19 45 30 22 15 38 8
 21 29 37 25 42 35 19 31 26 7
 22 11 27 44 24 22 32 18 40 29

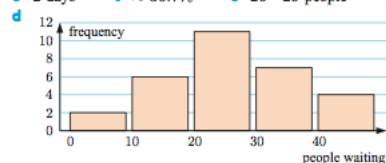
- Construct a tally and frequency table for this data using class intervals 0 - 9, 10 - 19, ..., 40 - 49.
- On how many days were there less than 10 people at the station?
- On what percentage of days were there at least 30 people at the station?
- Draw a column graph to display the data.
- Find the modal class of the data.

EXERCISE 6C

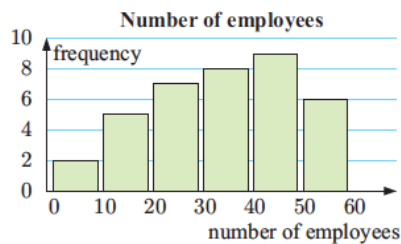
1 a

People waiting	Tally	Frequency	Rel. Freq.
0 - 9		2	0.067
10 - 19		6	0.200
20 - 29		11	0.367
30 - 39		7	0.233
40 - 49		4	0.133
Total		30	

- b 2 days c $\approx 36.7\%$ e 20 - 29 people



- 2 A selection of businesses were asked how many employees they had. A column graph was constructed to display the results.



- How many businesses were surveyed?
- Find the modal class.
- Describe the distribution of the data.
- What percentage of businesses surveyed had less than 30 employees?
- Can you determine the highest number of employees a business had?

- 2 a 37 b 40 - 49 employees c negatively skewed
d $\approx 37.8\%$
e No, only that it was in the interval 50 - 59 employees.

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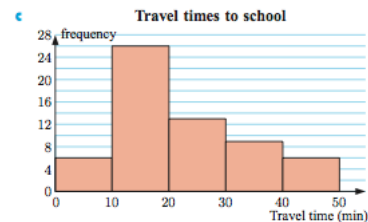
- 3 A school has conducted a survey of 60 students to investigate the time it takes for them to travel to school. The following data gives the travel times to the nearest minute.

12 15 16 8 10 17 25 34 42 18 24 18 45 33 38
45 40 3 20 12 10 10 27 16 37 45 15 16 26 32
35 8 14 18 15 27 19 32 6 12 14 20 10 16 14
28 31 21 25 8 32 46 14 15 20 18 8 10 25 22

- Is travel time a discrete or continuous variable?
- Construct a frequency table for the data using class intervals $0 \leq t < 10$, $10 \leq t < 20$, ..., $40 \leq t < 50$.
- Hence draw a histogram to display the data.
- Describe the distribution of the data.
- What is the modal travelling time?

3 a continuous

Travel time (min)	Tally	Frequency
$0 \leq t < 10$		6
$10 \leq t < 20$		26
$20 \leq t < 30$		13
$30 \leq t < 40$		9
$40 \leq t < 50$		6
Total		60



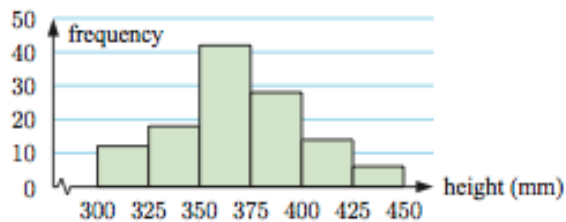
- d positively skewed e $10 \leq t < 20$ minutes

5 A plant inspector takes a random sample of six month old seedlings from a nursery and measures their heights. The results are shown in the table.

Height (h mm)	Frequency
$300 \leq h < 325$	12
$325 \leq h < 350$	18
$350 \leq h < 375$	42
$375 \leq h < 400$	28
$400 \leq h < 425$	14
$425 \leq h < 450$	6

- a Represent the data on a frequency histogram.
 b How many of the seedlings are 400 mm or more?
 c What percentage of the seedlings are between 350 and 400 mm?
 d The total number of seedlings in the nursery is 1462. Estimate the number of seedlings which measure:
 i less than 400 mm ii between 375 and 425 mm.

5 a Heights of 6-month old seedlings at a nursery



b 20 c $\approx 58.3\%$ d i 1218 ii 512

Classwork - Week 1

- * Discuss initial questions.
- * Look at data for plot "with fertilizer".
- * Conclusions comparing the two results.
- * Staple to the warm up and turn it in.

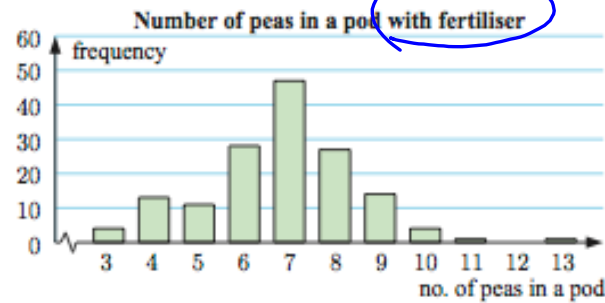
5 a

Peas in pod	Tally	Freq.
3		4
4		13
5		11
6		28
7		47
8		27
9		14
10		4
11		1
12		0
13		1
Total		150

w/out mode = 6

w/ mode = 7


b



Computers: Log into your 4j account
and pull up Google Drive

- * Enter data in a Spreadsheet
- * Explore functions and create a graph
- * Explore labels and refine the graph
- * Share it with me

Get Organized this weekend:

- * 3-Ring binder: 
 1. Current week classwork
 2. Current unit homework.
 3. IB Reference Sheets
 4. Past units, past notes...
- * Grapher
- * Ruler or Triangle scaled with cm and inches
- * Pencils, colored optional
- * This week's HW complete, labeled and in order for Tuesday's HW Quiz.

HW 1-5: (Week 1, Day 5 is Friday)

6E.1 p.172 #1, 2, 7-17

Go to my website, find the Stat Trek link under Class Resources. On the left side, click Charts and Graphs. Read or watch the videos for Patterns in Data, Dot Plots, Histograms and Stemplots.

And get organized!
(see previous slide)